

REMARKS

Summary of the Office Action

Claim 1 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kimura et al (JP 09-045275) (hereinafter "Kimura"), and further in view of Gilbert (JP 62-287560) (hereinafter "Gilbert").

Summary of the Response to the Office Action

Claim 1 has been amended, and new dependent claims 2-4 are added, to differently describe embodiments of the disclosure of the instant application. Accordingly, claims 1-4 are currently pending for consideration.

Rejection under 35 U.S.C. § 103(a)

Claim 1 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kimura, and further in view of Gilbert. Claim 1 has been amended to differently describe embodiments of the disclosure of the instant application. To the extent that this rejection might be deemed to still apply to the claim as newly-amended, it is respectfully requested for at least the following reasons.

At page 3 of the Office Action, the Examiner concedes that Kimura fails "to disclose that the columns are erected from a stem plate (8) making up the vacuum container (housing 1 of Fig. 2)." However, the Examiner than applies Gilbert as allegedly curing these deficiencies of Kimura by it's teaching of "...columns (sliding means 50) ... erected from a stem plate (base 6) ...". The Examiner alleges that "it would have been obvious ... to have the column of Kimura being erected the stem plate and fixed to the stem plate as taught by Gilbert since such structure

will have more stable configuration with more mechanical strength...” Applicants respectfully traverse this combination rejection for at least the following reasons.

As described at numerous portions of the specification of the instant application, the electron multiplier arrangement described and claimed in the instant application advantageously results in the respective dynodes and the respective insulating plates being integrally and firmly supported by the columns so that the dynodes and the insulating plates will not undergo lateral deviation due to vibration or impact. Accordingly, the dynode unit exhibits an excellent anti-vibration effect and an improved aseismic effect. See, for example, paragraphs [0008], [0034] and [0041] of the specification of the instant application in these regards. Applicants respectfully submit that such arrangements are not taught, nor even suggested, by Kimura.

While Applicants note that Gilbert does disclose a structure in which a supporting column is provided on a stem, Applicants respectfully submit that this dynode holding structure as disclosed in Gilbert has particular problems in terms of providing an improved aseismic capacity in accordance with the purpose of the disclosure of the instant application.

More particularly in this regard, Applicants respectfully submit that in the arrangement shown in Fig. 2 of Gilbert, a dynode part 40 is held by a pointed end of a supporting column. This arrangement makes the top portion heavy which would likely cause the dynode part 40 to shake easily. Even further, the fact that the arrangement disclosed in Gilbert does not include any strengthening element provided in the middle portion of the supporting column 50, Applicants respectfully submit that this would further increase the possibility that the overall arrangement would shake easily. Applicants respectfully submit that if such shaking affects the fixed portion of the supporting column 50 and stem 6 and the fixed portion of the supporting column 50 and dynode part 40, the supporting column 50 may come off or the fixation point of

the dynode part 40 may become loose. Therefore, Applicants respectfully submit that the structure disclosed in Gilbert would clearly result in poor overall aseismic capacity even though it employs a structure that provides a supporting column on a stem.

Turning now to the structure illustrated in Fig. 1 of Gilbert, Applicants respectfully submit that this figure shows a state midway through the manufacturing process. In other words, Fig. 1 does not show a completed state. Nevertheless, Applicants respectfully submit that even if dynode 40 was fixed in the state as shown in Fig. 1 of Gilbert, the basic structure would be the same as discussed previously with regard to Fig. 2 of Gilbert. As a result, Applicants respectfully submit that the instability of the dynode part 40 would still exist.

Accordingly, Applicants have decided to newly-amend independent claim 1 of the instant application to further emphasize particular structural features that result in the above discussed purpose of the instant application's disclosure of providing a significantly improved aseismic capacity.

Accordingly, newly-amended independent claim 1 of the instant application describes a combination of features of an electron multiplier including:

“a dynode unit, having a plurality of dynodes positioned in a mutually-insulated, layered state in multiple stages and disposed in a vacuum container; an anode housed inside the vacuum container; a plurality of insulating plates, insulating the respective dynodes from each other; and columns, erected from a stem plate, making up the vacuum container, so as to fit or engage with the respective dynodes, anode, and the respective insulating plates, wherein the respective dynodes and the respective insulating plates are overlapped alternating in the state of being fitted or engaged with the columns and the respective dynodes and the respective insulating plates are supported integrally on the columns by means of arresting members being fixed to the tip

portions of the columns, wherein a rear edge of each respective column is fixed to the stem plate and the arresting members are fixed to a front edge of each respective column, and wherein an insulating part is provided so as to surround each respective column in the area near the rear edge so that each dynode, anode, and insulating plate are stacked on the insulating part.”

Applicants respectfully submit that such features are neither shown nor suggested by the applied art of record. For example, Gilbert does not teach at least that its anode 90 is fixed on a supporting column in the manner specifically described in independent claim 1, as newly-amended. As a result, Applicants respectfully submit that there is a similar resultant problem that exists with regard to the instable structural arrangement and low aseismic capacity of the anode 90 in the Gilbert arrangement as discussed above with regard to the dynode part 40 of the Gilbert arrangement.

Accordingly, Applicants respectfully submit that one having ordinary skill in the art would not be led to make the combination of Kimura and Gilbert, as proposed in the Office Action’s rejection, because neither of these references teach or even suggest the desirability of such an increase in stability and aseismic capacity. Instead, Applicants respectfully submit that the Gilbert arrangement teaches away from obtaining an overall arrangement with increased stability and aseismic capacity in the manner discussed previously.

Accordingly, Applicants respectfully assert that the rejection under 35 U.S.C. § 103(a) should be withdrawn because Kimura and Gilbert, whether taken separately or combined, do not teach or suggest each feature of newly-amended independent claim 1 of the instant application.

As pointed out by MPEP § 2143.03, “[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art.” In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).” Also, since the prior art does not disclose or suggest any of

the combinations recited in Applicants' claims, and if anything appears to teach away from the current claim recitations, KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727 (2007), Applicants submit that such recited combinations would not have been obvious in view of the applied references of record, whether taken alone or combined in the manner suggested by the Examiner in the Office Action.

Furthermore, Applicants respectfully assert that the newly-added dependent claims 2-4 are allowable at least because of their dependence from newly-amended independent claim 1, and the reasons discussed previously.

CONCLUSION

In view of the foregoing discussion, Applicants submit that the pending claims are in condition for allowance, and respectfully request reconsideration and timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response; the Examiner is invited to contact Applicants' undersigned representative to expedite prosecution. A favorable action is awaited.

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. § 1.16 and 1.17 which may be required, including

any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0573.

This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF**

TIME in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

DRINKER BIDDLE & REATH LLP

Dated: July 28, 2009

By:

A handwritten signature in black ink, appearing to read "Paul A. Fournier", is written over a horizontal line.

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